

TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371

3120.00030

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

10/049354

INTERNATIONAL APPLICATION NO.  
PCT/GB00/03195INTERNATIONAL FILING DATE  
18 August 2000 (18.08.00)PRIORITY DATE CLAIMED  
18 August 1999 (18.08.99)TITLE OF INVENTION  
CONTAINER MOVING APPARATUSAPPLICANT(S) FOR DO/EO/US  
GER, Graham

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☐ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
  - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
  - a. ☐ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

## Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☒ Certificate of Mailing by Express Mail
23. ☐ Other items or information:

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INTERNATIONAL APPLICATION NO.

ATTORNEY'S DOCKET NUMBER

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24. The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

- ☐ Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... \$1040.00
- ☒ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... \$890.00
- ☐ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$740.00
- ☐ International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$710.00
- ☐ International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

\$890.00

Surcharge of \$130.00 for furnishing the oath or declaration later than \_\_\_\_\_ months from the earliest claimed priority date (37 CFR 1.492 (e)). ☐ 20 ☐ 30

\$0.00

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	30 - 20 =	10	x \$18.00	\$180.00
Independent claims	3 - 3 =	0	x \$84.00	\$0.00

Multiple Dependent Claims (check if applicable). ☐

\$0.00

TOTAL OF ABOVE CALCULATIONS =

\$1,070.00

☒ Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.

\$535.00

SUBTOTAL =

\$535.00

Processing fee of \$130.00 for furnishing the English translation later than \_\_\_\_\_ months from the earliest claimed priority date (37 CFR 1.492 (f)). ☐ 20 ☐ 30

+

\$0.00

TOTAL NATIONAL FEE =

\$535.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). ☐

\$0.00

TOTAL FEES ENCLOSED =

\$535.00

Amount to be:  
refunded  
charged

\$

\$

- a. ☒ A check in the amount of \$535.00 to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_ to cover the above fees. A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 11-1449. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

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Amy E. Rinaldo

NAME

45,791

REGISTRATION NUMBER

February 6, 2002

DATE

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Graham Gee  
National Phase of: PCT/GB00/03195  
International Filing Date: 18 August 2000  
For: CONTAINER MOVING APPARATUS  
Attorney Docket Number: 3120.00030

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box PCT

Dear Sir:

Please preliminarily amend the above-captioned patent application prior to examination on the merits, consistent with the instructions found attached hereto:

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### **CROSS-REFERENCE TO RELATED APPLICATIONS**

This patent application is a National Phase Concerning a Filing Under 35 U.S.C. 371, claiming the benefit of priority of PCT/GB00/03195, filed August 18, 2000, which claims the benefit of priority of Great Britain Application Serial No. 9919420.1, filed August 18, 1999, all of which are incorporated herein by reference.

### **IN THE CLAIMS:**

3. (Amended) Apparatus according to claim 1 in which the container (32) is a fluid filled container.

4. (Amended) Apparatus according to claim 1 in which the frame is arranged, in use, to be secured to the container (32) such that the container (32) can rotate relative to the frame and the container (32) can be rolled along a surface of the ground.

6. (Amended) Apparatus according to claim 1 in which the frame is arranged to clamp the container (32).

7. (Amended) Apparatus according to claim 1 in which the frame has a first clamping member (20) and a second clamping member (22).

10. (Amended) Apparatus according to claim 8 in which in the second position the clamping members (20, 22) are spaced apart by distance substantially the same as the length of the container (32).

11. (Amended) Apparatus according to claim 8 in which the container (32) is clamped in the second position.

12. (Amended) Apparatus according claim 1 in which the length of the frame is adjustable.

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13. (Amended) Apparatus according to 1 in which the width of the frame is adjustable.

14. (Amended) Apparatus according to claim 7 in which the frame comprises first and second side members (12, 14).

17. (Amended) Apparatus according to claim 14 in which the first and second clamping members (20, 22) are rotatably connected to the first and second side members (12, 14).

19. (Amended) Apparatus according to claim 14 in which adjustment means are located between the first and second side members (12, 14).

20. (Amended) An assembly comprising apparatus (10) for moving a container (32) in accordance with claim 1 in which the apparatus (10) is secured to a container (32).

23. (Amended) A method according to claim 21 wherein the method comprises pulling the frame.

24. (Amended) A method according to claim 21 in which the method is a manual method of moving the container (32).

25. (Amended) A method according to claim 21 in which the method comprises clamping the container (32) in the frame.

29. (Amended) A method according to claim 21 in which the method comprises operating a ratchet mechanism (30) to move first and second clamping members (20, 22).

30. (Amended) A method according to claim 26 in which the method comprises operating a clamp to move first and second clamping members (20, 22).

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**REMARKS**

The above amendments add no new matter and are merely made to more accurately describe and claim the invention, to claim benefit of priority, and to eliminate multiple claim dependencies.

Respectfully solicited,

KOHN & ASSOCIATES



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Dated: February 6, 2002

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231, Box Patent Application.

  
\_\_\_\_\_  
Connie Herty

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PCT/GB00/03195  
Attorney Docket No. 3120.00030

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

Page 1, after the Title, please insert the following section:

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This patent application is a National Phase Concerning a Filing Under 35 U.S.C. 371, claiming the benefit of priority of PCT/GB00/03195, filed August 18, 2000, which claims the benefit of priority of Great Britain Application Serial No. 9919420.1, filed August 18, 1999, all of which are incorporated herein by reference.

**IN THE CLAIMS:**

3. (Amended) Apparatus according to claim 1 [or claim 2] in which the container (32) is a fluid filled container.

4. (Amended) Apparatus according to [any preceding] claim 1 in which the frame is arranged, in use, to be secured to the container (32) such that the container (32) can rotate relative to the frame and the container (32) can be rolled along a surface of the ground.

6. (Amended) Apparatus according to [any preceding] claim 1 in which the frame is arranged to clamp the container (32).

7. (Amended) Apparatus according to [any preceding] claim 1 in which the frame has a first clamping member (20) and a second clamping member (22).

10. (Amended) Apparatus according to claim 8 [or claim 9] in which in the second position the clamping members (20, 22) are spaced apart by distance substantially the same as the length of the container (32).

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11. (Amended) Apparatus according to [any of] claim[s] 8 [to 10] in which the container (32) is clamped in the second position.

12. (Amended) Apparatus according [to any preceding] claim 1 in which the length of the frame is adjustable.

13. (Amended) Apparatus according to [any preceding] claim 1 in which the width of the frame is adjustable.

14. (Amended) Apparatus according to [any preceding] claim Z in which the frame comprises first and second side members (12, 14).

17. (Amended) Apparatus according to [any of] claim[s] 14 [to 16] in which the first and second clamping members (20, 22) are rotatably connected to the first and second side members (12, 14).

19. (Amended) Apparatus according to [any of] claim[s] 14 [to 18] in which adjustment means are located between the first and second side members (12, 14).

20. (Amended) An assembly comprising apparatus (10) for moving a container (32) in accordance with [any preceding] claim 1 in which the apparatus (10) is secured to a container (32).

23. (Amended) A method according to claim 21 [or claim 22] wherein the method comprises pulling the frame.

24. (Amended) A method according to [any of] claim[s] 21 [to 23] in which the method is a manual method of moving the container (32).

25. (Amended) A method according to [any of] claim[s] 21 [to 24] in which the method comprises clamping the container (32) in the frame.

29. (Amended) A method according to [any of] claim[s] 21 [to 28] in which the method comprises operating a ratchet mechanism (30) to move first

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and second clamping members (20, 22).

30. (Amended) A method according to [any of] claim[s] 26 [to 29] in which the method comprises operating a clamp to move first and second clamping members (20, 22).

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CONTAINER MOVING APPARATUSField of the Invention

5       The invention relates to container moving apparatus and especially, but not limited to, apparatus for moving containers containing fluids, for example beer barrels or gas cylinders.

10   Background to the Invention

Containers containing fluids, for example beer barrels, gas cylinders, chemical drums, oil drums and fluid filled plastic containers are heavy and difficult to move. This  
15 is especially apparent for containers having a volume of 5 gallons and upwards. The barrels can simply be pushed and rolled along the ground. However, with these methods the barrels are generally out of control if being pushed down a decline and are therefore dangerous. In addition, the  
20 barrels are difficult to push up an incline and are also at risk of rolling back down the incline. Furthermore, if the barrels are manually manoeuvred then this requires the person to bend over in order to push the barrels. This puts the person at risk from injury and puts a high strain  
25 on the back of the individual. Any resultant back pain can result in time off work for the individual, and, therefore, puts a burden on the employer.

A prior art method comprises a trolley having a  
30 support section located between two wheels and a handle. The barrel is placed on the support section and the support section is tilted using the handle and the barrel can then be manoeuvred. One problem with such trolleys is

that the wheels are generally small which makes the trolley difficult to manoeuvre upstairs or downstairs. In addition, the barrel is at risk of falling off the support section when manoeuvring down a decline or downstairs.

- 5 With such trolleys the barrel travels in front of the individual. At sharp corners there is a risk of a collision since the individual cannot see around the corner prior to the barrel being pushed in front of the corner. The only solution is for the individual to stop  
10 pushing the trolley and firstly check for hazards around the corner.

It is an aim of the present invention to overcome at least one problem associated with the prior art whether  
15 referred to herein or otherwise.

#### Summary of the Invention

According to a first aspect of the present invention  
20 there is provided apparatus for moving a container, the apparatus comprising a frame, the frame comprising a handle section, the frame being arrangeable, in use, to be secured to the container such that the container can rotate relative to the frame and the container can be  
25 rolled along a surface, movement of the container being controlled by the handle section.

According to a second aspect of the present invention there is provided an assembly comprising apparatus for  
30 moving a container in accordance with the first aspect of the present invention secured to a container.

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Preferably the cross section of the container is substantially circular. The container may be substantially cylindrical. The container may be a fluid filled container. The container may be a barrel and may  
5 be a beer barrel. The container may be a cylinder and may be a gas cylinder. The container may be a chemical drum or an oil drum. The container may be a plastics container. The container may be arranged to contain greater than 3 gallons and preferably greater than 5  
10 gallons of a fluid. The container may be arranged to contain substantially 9 or 10 or 11 or 18 or 22 gallons of a fluid.

The frame may be arranged, in use, to be secured to  
15 the container such that the container can rotate relative to the frame and the container can be rolled along a surface or the ground preferably by manually pulling or pushing the frame.

20 Preferably the frame is arranged to clamp the container.

Preferably the frame has a first clamping member and a second clamping member. Preferably the first and second  
25 clamping members can be moved towards each other between at least a first and second position. Preferably the clamping members are locked in the first position. Preferably the clamping members are locked in the second position. In the first position the clamping members may  
30 be spaced apart by a distance greater than the length of the container. In the second position the clamping members may be spaced apart by a distance substantially

the same as the length of the container. Preferably the container is clamped in the second position.

The first and second clamping members may be plates.

5 The clamping members may have projections located thereon. Each clamping member may have a plurality of projections located thereon and preferably four or five projections located thereon. The projections on the first clamping member may project towards the projections on the second

10 clamping member. The projections on at least one of the clamping members may be radially spaced to enable a spear of a beer barrel to be located therebetween. The projections on one clamping member may be longer than the projections on the other clamping member. The projections

15 may be radially located on each clamping member. The projections may comprise a point at the end. The projections may be rounded or flat at the end. The projections may comprise a metal and may comprise hardened steel.

20

One or each clamping member may have a reinforcement plate spaced from the clamping member. Preferably the or each reinforcement plate reinforces the projections.

25 The clamping member may comprise conical members. The conical members may comprise a plastics material.

The clamping members may comprise material for improving the grip of the container. The material may comprise

30 rubber. The clamping member may comprise rubber discs or rubber annular members.

The frame may comprise a metal and preferably is substantially aluminium. The length of the frame may be adjustable. The width of the frame may be adjustable.

- 5       The frame may comprise first and second side members. The handle may be connected between the first and second side members. The first and second side members may be connected by a reinforcement member. The length of the reinforcement member may be adjustable. The distance
- 10       between the first and second side members may be adjustable. The first and second side members may support the first and second clamping members respectively. Preferably the first and second clamping members are rotatably connected to the first and second side members.
- 15       Preferably the first and second clamping members are secured to the first and second side members through a bearing and preferably through a rolling bearing which may be a three dimensional bearing.
- 20       Preferably the plates of the first and second clamping members can pivot relative to the side members.

- Preferably adjustment means are located between the first and second side members. Preferably the means
- 25       adjusts the distance between the first and second side members. The means may comprise a flexible member which is secured between the first and second side members. Preferably the length of the flexible member may be adjusted. The flexible member may comprise a length of
- 30       webbing. The means may comprise a ratchet mechanism or a clamping mechanism.

The adjustment means may comprise a clamping mechanism.

The apparatus may have a brake mechanism. The brake  
5 mechanism may inhibit or prevent rotation of the container relative to the frame.

According to a third aspect of the present invention there is provided a method of moving a container, the  
10 method comprising the steps of fixing a frame to a container such that the container can rotate relative to the frame and moving the frame such that the container rotates relative to the frame and the container rolls  
15 along a surface.

The method may comprise pushing the frame. Preferably the method comprises pulling the frame. Preferably the method is a manual method of moving the container.

20 Preferably the method comprises clamping the container in the frame. Preferably the method comprises clamping the container between first and second clamping members. Preferably the method comprises clamping the container between projections on the first and second clamping  
25 members.

Preferably the method comprises clamping the ends of the container between the clamping members.

30 The method may comprise moving first and second clamping members between a first and second position to clamp the container. The method may comprise operating a ratchet mechanism to move first and second clamping

members. The method may comprise operating a clamp to move first and second clamping members.

Brief Description of the Drawings

5

The present invention will now be described, by way of example only, with reference to the drawings that follow, in which;

10 Figure 1 is a front view of one embodiment of beer barrel moving apparatus according to the invention;

Figure 2 is a side view of the beer barrel moving apparatus;

15

Figure 3 is a front view of the beer barrel moving apparatus attached to a beer barrel;

20 Figure 4 is a side view of the beer barrel moving apparatus affixed to a beer barrel;

Figure 5 is a front view of a clamping plate;

25 Figure 6 is a front view of an annular reinforcement plate;

Figure 7 is a side view of a clamping member;

Figure 8 is a side view of a clamp;

30

Figure 9 is a front view of a further embodiment of beer barrel moving apparatus; and

Figure 10 is a front view of a further embodiment of a clamping mechanism for use with beer barrel moving apparatus.

5 Description of the Preferred Embodiments

As shown in Figures 1 and 2, beer barrel moving apparatus 10 has a frame comprising two side members 12, 14 which are connected at an upper location by a handle section 16. The side members 12, 14 are connected at a lower position by a reinforcement member 18.

The side members 12 and 14, handle section 16 and reinforcement member 18 all comprise tubular or box sections of aluminium. The handle section 16 and the reinforcement member 18 are both telescopic. The handle section 16 has two outer tube sections 11, 13 each being connected to one side member 12, 14 respectively. An inner tube section 15 having a smaller cross section is located inside the two outer sections 11, 13. Similarly, the reinforcement member 18 has two outer tube sections 17, 19 each being connected to one side member 12, 14 respectively. An inner tube section 21 having a smaller cross section is located inside the two outer sections 17, 19. This arrangement enables the length of the handle section 16 and the length of reinforcement member 18 to be adjusted by sliding the outer sections over the inner sections.

Each side member has a clamping member 20, 22 secured at a lower position. The clamping members 20, 22 are secured to the side members 12, 14 through roller bearings

24, 26. The bearings 24, 26 enable the clamping members 20, 22 to rotate relative to the side members 12, 14.

The side members 12, 14 are also connected by a flexible member 28. The flexible member 28 may be a section of webbing. The webbing 28 has a ratchet mechanism 30 located thereon.

The ratchet mechanism 30 enables the length of the webbing to be adjusted. By using the ratchet mechanism 30 to decrease the length of the webbing 28, the side members 12, 14 and the clamping members 20, 22 are moved towards each other and the lengths of the handle section 16 and the reinforcement member 18 are shortened.

15

As shown in Figures 3 and 4 a beer barrel 32 can be clamped between the two clamping members 20, 22. Once the beer barrel 32 is clamped by the clamping members 20, 22, the beer barrel 32 is able to rotate relative to the frame 10 as a result of the roller bearings 24, 26.

The barrel 32 is secured to the frame 10 by firstly spacing the clamping members 20, 22 by a distance greater than the length of the barrel 32. The clamping members are then positioned within the end annular flanges 34 of the barrel. The ratchet mechanism 30 is operated to reduce the length of the webbing 28. The axes of the clamping members 20, 22 are aligned with the central axis of the barrel 32. This subsequently results in a smooth rolling action of the barrel relative to the frame 10.

The reduction of the length of the webbing 28 urges the side members 12, 14 towards each other. This causes

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the handle section 16 and reinforcement member 18 to subsequently shorten. In addition, the clamping members 20, 22 are urged towards each other until they abut the ends of the barrel 32. The ratchet mechanism 30 is operated further to attempt to shorten the webbing 28 which causes an increase in the pressure of the clamping members 20, 22 on the ends of the barrel. Once the clamping force of the clamping members 20, 22 on the ends of the barrel 32 holds the barrel 32 firmly the operation of the ratchet mechanism can be ceased.

A person can grasp the handle section 16 and move the frame to be at an angle to the ground and the barrel 32. Once at an angle the person can push or pull the frame which thereby causes the barrel 32 to roll along the ground and can then be easily manoeuvred in a controlled manner. The person can move the barrel 32 whilst in an upright stance which thereby reduces any strain placed on their back.

The diameter of a beer barrel 32 is greater than the height of conventional steps. In addition, the diameter of a beer barrel 32 may be greater than twice the height of a step. Therefore, if the barrel 32 needs to be moved up some stairs then the person simply pulls the frame and the barrel to the bottom of the first step. Once at the bottom of the first step the person can pull on the frame to move the barrel 32 up the steps. This is not possible with prior art methods using a trolley with small wheels. In addition, the barrel 32 is always under control and cannot become separated from the frame 10.

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If the barrel 32 has not been properly clamped in the frame 10 then the barrel 32 may work loose. Beer barrels have annular flanges 34 located at each end of the barrel. The annular flanges 34 project outwardly from the periphery of the barrel from each end. Therefore, if the clamping members 20, 22 work loose from the surface of the ends of the barrel 32 then they will abut an inner part of the annular flanges 34. Accordingly, the beer barrel 32 does not become separated from the frame 10. This enables the barrel 32 to be re-clamped and the barrel 32 will not have been out of control.

Once at the destination, the barrel 32 is removed from the frame 10. In order to release the barrel 32 from the frame 10 the ratchet mechanism 30 is operated to release its grip on the webbing 28. This enables the clamping members 20, 22 to be moved away from each other until the clamping members 20, 22 are spaced apart by a distance greater than the length of the barrel 32. The frame 10 can then be removed from the barrel 32 and the barrel can be manually handled to an upright position if required.

The clamping members are shown in more detail in Figures 5, 6 and 7. Each clamping member has a base plate 40. The base plate 40 is circular shape although a different shape can be used. Each clamping member has a shaft (not shown) affixed centrally on one side of the base plate. Each shaft projects from the base plate 40 and through a roller bearing located on the side members. This enables the base plate 40 and hence the clamping members 20, 22 to rotate relative to the side member 12, 14.

On the other side of the base plate 40 there are projections 42 secured thereto. There may be four or five such projections 42 which are radially positioned on the base plate 40. The projections 42 are lengths of hardened steel and may be welded to the base plate 40. Alternatively, the projections 42 may project through the base plate 40 and be secured by a bolt. However, the welded attachment is preferable since the other side of the base plate will not have any projecting portions and this may reduce the overall width of the frame. It is preferable to keep the overall width of the frame as short as possible in order for the frame to be able to manoeuvre beer barrels through narrow gaps.

The projections have a point at their outermost end. The point may provide a small dimple in the surface of the ends of the barrel 32 when clamped. The small dimple will give an improved grip of the barrel by the frame. However, the projections may be rounded or flat at the end. The shape of the ends of the projections may depend upon the container and/or the material of the container.

Each clamping member has a reinforcement plate 44 that is an annular plate. The annular plate 44 strengthens the arrangement of the projections 42. The annular plate 44 has five apertures 45 located radially to enable the projections 42 to pass therethrough. The annular plate 44 has a central aperture. This central aperture and the radial arrangement of the projection 42 enables a spear of a beer barrel to be located therein.

The projections on one of the clamping members may be longer than the projections on the other clamping member.

This provides a greater distance from the base plate to the surface of the barrel 32 and, enables the clamping member to easily accommodate the spear of a beer barrel.

5        In order to improve the grip on the beer barrel 32 a layer of a material may be located between the projections and the surface of the beer barrel 32. This may be a layer of a plastics material and may be a rubber material. The shapes of the ends of the projections may be rounded  
10      or flat to improve the grip on the container.

A clamp mechanism 50 may be used as an alternative to the ratchet mechanism 30, as shown in Figure 8. The clamp 50 has an extending member 52 which is secured to the  
15      webbing extending from both side members. The extending member is able to move about a pivot 54 which causes a decrease in the overall length of the webbing. The section of webbing 56 attached to the first side member moves towards the section of webbing 58 attached to the  
20      second side member. This causes the first and second clamping members to move towards each other to clamp the container. The clamp can be released to increase the length of the webbing for the container to be removed.

25       A further embodiment of beer barrel moving apparatus 10 is shown in Figure 9 and Figure 10. The apparatus 10 comprises side members 12 and 14, a handle section 16 and a reinforcement member 18. The reinforcement member 16 is adjustable in length in order to move the side members 12  
30      and 14 towards and away from each other in order to clamp and release the beer barrel.

The reinforcement member 16 comprises a shaft 70 having two open ends at the longitudinal ends thereof. A first extending member 74 projects from the first side member 12 and is slidably engaged within the shaft 70.

5 Similarly a second extending member 76 projects from the second side member 14 and is slidably engaged in the other end of the shaft 70. The second extending member 76 comprises a flange 78 about its periphery. A spring 80 locates between the flange 78 and the periphery of the

10 shaft 70 in order to urge the shaft 70 away from the second side member 16.

A second flange member 82 locates around the periphery of the first extending member 74. The second flange member 82 is mounted on a carriage 83 which is connected

15 to the shaft 70. The second flange member 82 acts as a retaining means to retain the first extending member 74 at a fixed position relative to the shaft 70. In order to extend or retract the first extending member 74 relative

20 to the shaft 70 a release level 85 can be moved along its longitudinal axis and held in position in order for the first extending member 74 to slidably move relative to the shaft 70. The second flange member 82 is not integral with the first extending member 74 and can be slidably

25 moved along the longitudinal length of the first extending member 74. This retaining means comprises a plate 84 having an aperture defined therein. The first extending member 74 is able to slide through this aperture when the plate is substantially perpendicular to the first

30 extending member 74. However, the first extending member 74 is retained in position relative to the plate 84 and hence the shaft 70 when the plate is at an angle. A spring 87 coupled with an abutment member 89 urge the

plate 84 in to an angled configuration when the release lever is at rest. However, when the release lever is pulled along its longitudinal axis towards the second side member 16 the plate 84 can be positioned to be substantially perpendicular relative to the first extending member 74 and the first extending member can be extended from or retracted into the shaft 70. This arrangement enables barrels of different lengths to be secured with the beer barrel moving apparatus 10.

10

In order to clamp a beer barrel in the beer barrel moving apparatus 10 firstly the second flange member 82 is moved along the first extending member 74 in order for the clamping members 90, 92 to lightly grip the ends of the beer barrel. A lever handle 86 which is pivotally connected to the second extending member through a pivot 88 is rotated around the pivot from an open to a closed position. Figure 9 and Figure 10 show the lever handle in a closed position. The lever handle may comprise a grip portion 87 to aid the user. As the lever handle 86 is pivoted a lever mechanism comprising a lever member 90 moves the shaft 70 along the second extending member 76 towards the second side member 14. As the shaft 70 moves towards the second side member the first extending member 74 and also the first side member 12 are also moved towards the second side member 12, 14. Therefore, the first and second side members 12, 14 and, hence the first and second clamping members 90, 92 are moved relative towards each other. In order to release the beer barrel, the lever handle 86 is rotated in the opposite direction in order for the side members 12, 14 to move away from each other as encouraged by the spring 80.

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The clamp members 90, 92 mounted on the side members 12, 14 may comprise resilient members. The resilient members may provide a good grip of the ends of the barrel. The clamp members 90, 92 may comprise rubber discs or  
5 rubber annulars which are mounted on cones and preferably plastic cones. In addition, the clamp members 90, 92 may be able to pivot relative to the side members in order for the plane of the clamp members to be in a different plane, for example the plane of the clamp members may not be  
10 exactly vertical. For example, the clamp members may be mounted to the side members by 3 dimensional bearings.

Finally, the beer barrel moving apparatus 10 may comprise a brake mechanism. Each clamp member 90,92 may  
15 have a brake shoe 94,96 associated therewith. Each brake shoe 94,96 is operated independently by a brake lever 98,100 mounted on the handle 16. On pulling the brake levers 98, 100 towards the handle 16 the brake shoes 94, 96 are caused to move towards the outer periphery of the  
20 clamp members 90, 92 and, eventually, abut the clamp members 90, 92 to inhibit further rotation. The brake mechanism operates using conventional cables. Alternatively, the beer barrel moving apparatus may comprise a single lever operating two brake shoes or a  
25 single lever operating a single brake shoe associates with only one clamp member.

The apparatus 10 may be adapted to move other containers especially fluid filled containers, for example  
30 gas cylinders, oil drums, chemical drums or plastics containers. The containers may be arranged to contain a volume of a fluid greater than 5 gallons and may be

arranged to contain a volume of substantially 9 or 10 or 11 or 18 or 22 gallons of a fluid.

5 The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

10

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, 15 except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and 20 drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

25

The invention is not restricted to the details of the foregoing embodiment(s). The invention extend to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, 30 abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.



8. Apparatus according to claim 7 in which the first and second clamping members (20, 22) can be moved towards each other between at least a first and second position.

5

9. Apparatus according to claim 8 in which in the first position the clamping members (20, 22) are spaced apart by a distance greater than the length of the container (32).

10 10. Apparatus according to claim 8 or claim 9 in which in the second position the clamping members (20, 22) are spaced apart by distance substantially the same as the length of the container (32).

15 11. Apparatus according to any of claims 8 to 10 in which the container (32) is clamped in the second position.

12. Apparatus according to any preceding claim in which the length of the frame is adjustable.

20

13. Apparatus according to any preceding claim in which the width of the frame is adjustable.

14. Apparatus according to any preceding claim in which  
25 the frame comprises first and second side members (12, 14).

15. Apparatus according to claim 14 in which the first and second side members (12, 14) are connected by a  
30 reinforcement member (18).

16. Apparatus according to claim 15 in which the length of the reinforcement member (18) is adjustable.

17. Apparatus according to any of claims 14 to 16 in which the first and second clamping members (20, 22) are rotatably connected to the first and second side members  
5 (12, 14).

18. Apparatus according to claim 17 in which the first and second clamping members (20, 22) are secured to the first and second side members (12, 14) through a bearing (24,  
10 26).

19. Apparatus according to any of claims 14 to 18 in which adjustment means are located between the first and second side members (12, 14).

15

20. An assembly comprising apparatus (10) for moving a container (32) in accordance with any preceding claim in which the apparatus (10) is secured to a container (32).

20 21. A method of moving a container (32), the method comprising the steps of fixing a frame to a container (32) such that the container (32) can rotate relative to the frame and of moving the frame such that the container (32) rotates relative to the frame and the container rolls  
25 along a surface.

22. A method according to claim 21 wherein the method comprises pushing the frame.

30 23. A method according to claim 21 or claim 22 wherein the method comprises pulling the frame.

24. A method according to any of claims 21 to 23 in which the method is a manual method of moving the container (32).

5 25. A method according to any of claims 21 to 24 in which the method comprises clamping the container (32) in the frame.

10 26. A method according to claim 25 in which the method comprises clamping the container (32) between first and second clamping members (20, 22).

15 27. A method according claim 26 in which the method comprises clamping the ends of the container (10) between the clamping members (20, 22).

20 28. A method according to claim 27 in which the method comprises moving first and second clamping members (20, 22) between a first and second position to clamp the container (32).

25 29. A method according to any of claims 21 to 28 in which the method comprises operating a ratchet mechanism (30) to move first and second clamping members (20, 22).

30. A method according to any of claims 26 to 29 in which the method comprises operating a clamp to move first and second clamping members (20, 22).

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 February 2001 (22.02.2001)

PCT

(10) International Publication Number  
**WO 01/12491 A1**

(51) International Patent Classification: **B62B 1/26**

(21) International Application Number: PCT/GB00/03195

(22) International Filing Date: 18 August 2000 (18.08.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
9919420.1 18 August 1999 (18.08.1999) GB

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

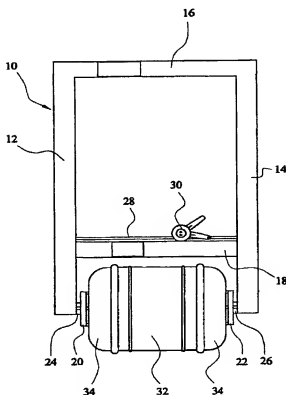
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTAINER MOVING APPARATUS



(57) Abstract: Containers containing fluid can be difficult to move especially in a controller manner. Container moving apparatus (10) comprises a frame comprising two side members (12, 14) which are connected at an upper location by a handle section (16). Each side member has a clamping member (20, 22) secured at a lower position. The clamping members (20, 22) are secured to the side members (12, 14) through roller bearings (24, 26) in order for the clamping members (20, 22) to rotate relative to the side members (12, 14). The clamping members (20, 22) are arranged to clamp a container (32) therebetween in order for the container (32) to be rolled along a surface under the control of the handle section (10). The clamping members (20, 22) can be moved apart in order to release the container (32) and move towards each other in order to clamp the container (32).

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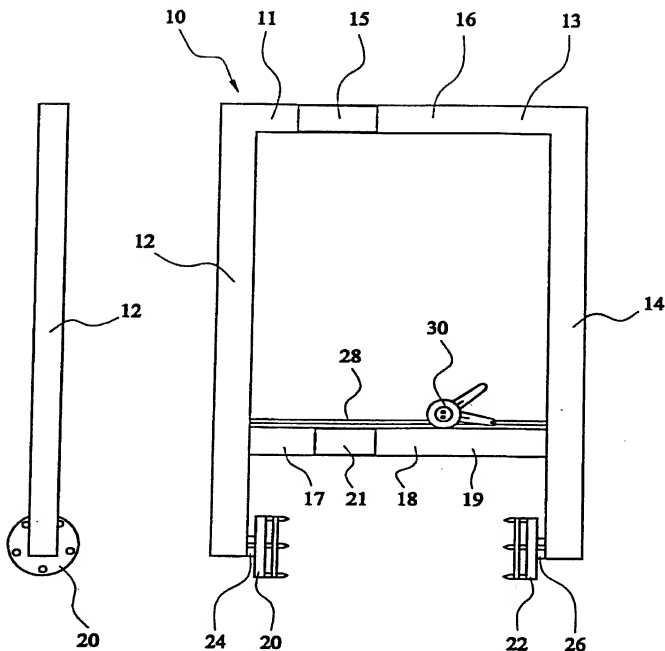


FIG. 2

FIG. 1

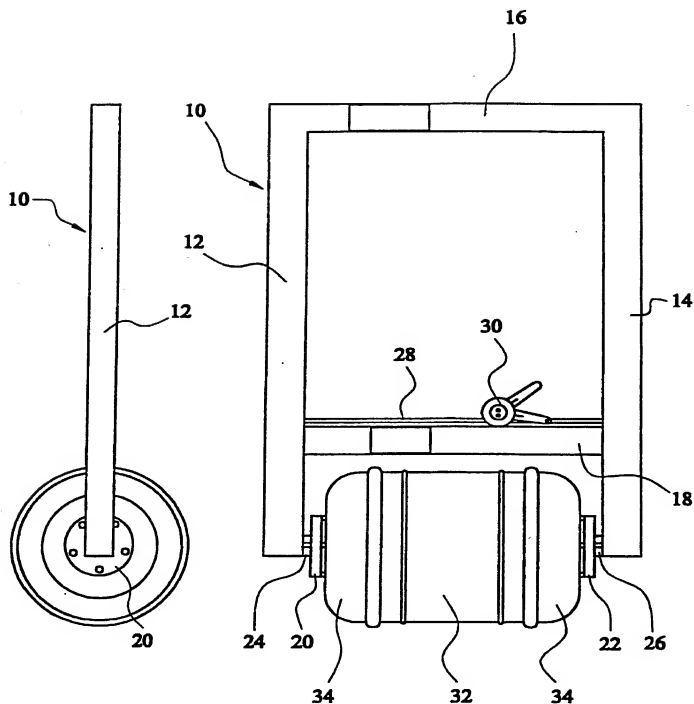


FIG. 4

FIG. 3

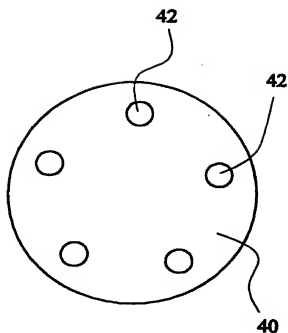


FIG. 5

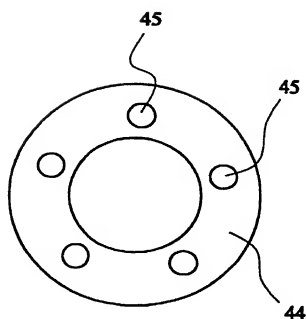


FIG. 6

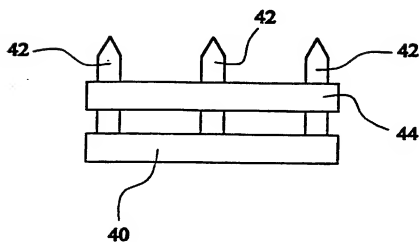


FIG. 7

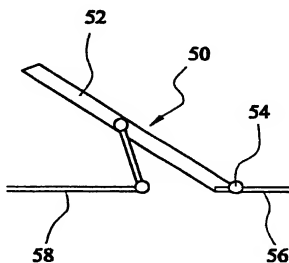
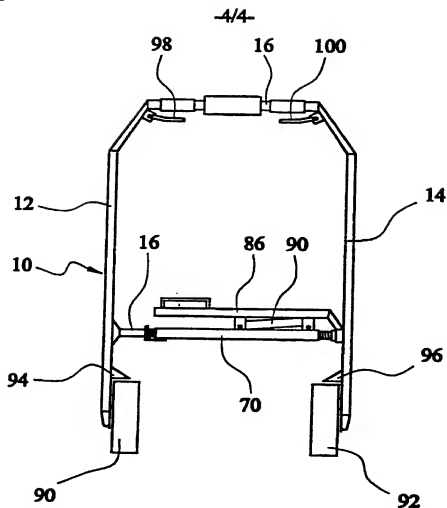
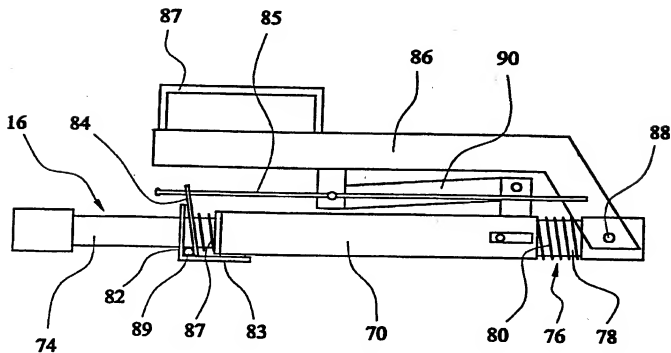


FIG. 8



**FIG. 9**



**FIG. 10**

Docket No.  
3120.00030

## Declaration and Power of Attorney For Patent Application

### English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled  
**CONTAINER MOVING APPARATUS**

the specification of which

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(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

9919420.1	Great Britain	August 18, 1999	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

**PCT/GB00/03195**

**August 18, 2000**

**pending**

(Application Serial No.)

(Filing Date)

(Status)

(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)

(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

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(patented, pending, abandoned)

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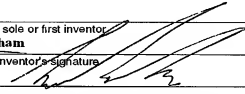
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